Colorado Department of Public Health and Environment
Air Pollution Control Division

Colorado Department of Public Health and Environment

Guidance Document – Form APCD-208
Hydrocarbon Loading
Air Pollutant Emissions Notice (APEN)

Ver. September 9, 2010

The following guidance document is intended to provide further detail on completing the Air Pollutant Emissions Notice (APEN). Please include the permit number and AIRS ID of the reported equipment if the Air Pollution Control Division (APCD) has previously assigned these numbers. If you are reporting new equipment that does not have a permit number or AIRS ID, leave these spaces at the top of the form blank.

This form may not be used for reporting emissions from gasoline dispensing facilities (GDFs). GDFs may report emissions on the Fuel Dispensing Station APEN form available at: http://www.cdphe.state.co.us/ap/downloadforms.html

The APEN submitted is valid for five (5) years from the date it is received by the APCD. An APEN update must be submitted to the APCD no later than 30 days before this 5-year term expires.

The applicant must submit a $152.90 filing fee with each APEN submitted. The application will not be processed without an APEN filing fee.

An applicant may group emission points on a single APEN according to Regulation No. 3, Part A, II.B.4. Emissions displaced from cargo carriers and those vented by disconnecting pressurized loading lines may not be grouped on a single APEN as these unique activities have different emission profiles. *Guidance on emissions source grouping may be found online at:* http://www.cdphe.state.co.us/ap/down/Ps95-013.pdf

Section 01 - Administration Information

This section contains general information for the company.
NAICS codes: can be found online at- http://www.naics.com/search.htm
SIC codes: can be found online at- http://www.osha.gov/pls/imis/sicsearch.html

Section 02 - Requested Action

Guidance on Revised APENs may be found online at: http://www.cdphe.state.co.us/ap/down/ps02-01.pdf

NEW: Check this box if source has not been assigned a permit number and you are applying for a new individual permit or to newly report an emission source.

MODIFICATION: Check this box if source already has a permit issued and you would like to modify the individual permit. Specify all the modifications you are requesting in an attached cover letter.

LIMIT HAP PTE: Check this box if your equipment has the potential to emit (PTE) Hazardous Air Pollutants (HAPs) at Major Source levels (10 ton/yr of any HAP, or 25 ton/yr of any combination of HAPs) and you would like a permit limit to reduce the PTE below Major Source levels. *Guidance regarding HAP PTE may be found online at:* http://www.cdphe.state.co.us/ap/down/Ps97-001.pdf

APEN UPDATE: Check this box to update your APEN without any permit modifications. If you submit an APEN to update your actual calendar year emissions, this will also update the 5-year APEN term. Please review your previously submitted APEN, and verify that no changes have occurred prior to submittal of an APEN update.

Other than the 5 year expiration date, a revised APEN must be submitted:

- Prior to the installation of new equipment/emission point, or replacement of equipment or pollution control equipment.

- Prior to any change in the ownership or operator of a facility or location.
- To change a permit limit or condition.
- Whenever a significant change in annual (calendar year) actual emissions occurs.

A significant change for a criteria pollutant is defined as:

Sources which emit 100 tons per year or more: any change of 5% or 50 tons/year or more of actual emissions, whichever is less.

Sources which emit less than 100 tons per year: any change of 5 tons/year or more of actual emissions, except for sources of volatile organic compounds and nitrogen oxides in ozone nonattainment areas which must report any change of 1 ton/year or 5% of actual emissions, whichever is greater.

A significant change for Non-Criteria Reportable Air Pollutants (See Regulation 3, Part A, Appendix A) is defined as:

Any increase of 50% or 5 tons/year of actual emissions, whichever is less.

Please Note: ***For an APEN to be considered complete, all appropriate fields for current operating and company data must be filled out. The application will not be accepted if all fields are not completed.***

Section 03- General Information

Provide overall source schedule, times, and dates of operation and a general description of equipment used, and the purpose of the equipment.

Answer questions listed in the general information section as they pertain to the source.

Please note if your facility is located in a non-attainment area for any *National Ambient Air Quality Standard* (NAAQS) criteria pollutant (Nitrogen Oxide, Sulfur Dioxide, Ozone, Volatile Organic Compounds, PM_{10}, $PM_{2.5}$, TSP, Carbon Monoxide, Lead). Refer to http://www.cdphe.state.co.us/ap/attainmaintain.html for more information.

Section 04 – Loading Information

Complete requested information for all sources. Emissions displaced from cargo carriers and those vented by disconnecting loading lines may not be reported together on a single APEN because these activities result in different emissions profiles. If your loading operations rely solely on cargo container or truck-mounted pumps for loading, please enter "N/A" in the "Pump Capacity at Each Bay" field.

Vapors displaced from cargo carriers

Loading losses are emitted from cargo carriers during re-filling. Residual product vapors in the carrier from previous loads are displaced by liquids being loaded into the carrier as the carrier fills. Additional vapors are also generated in the carrier from the new product as it is being loaded. The EPA has developed a loading loss equation that relates loading losses (expressed in a pounds VOC per 1000 gallons of liquid loaded emission factor) to a saturation factor, the average bulk temperature of the liquid loaded, and the molecular weight of the displaced vapors. The saturation factor is based on whether the carrier uses submerged or splash filling and the physical and chemical properties of the previous load carried. Select a saturation factor from AP-42, Table 5.2-1 using the fill method and the contents of the tank and determine representative values for the activity you are reporting of the temperature of the liquid loaded and the molecular weight of the displaced vapors to complete this section. Refer to AP-42 Chapter 5 at http://www.epa.gov/ttn/chief/ap42/ch05/index.html

Vapor losses from pressurized loading lines

These emissions are generated when the liquids in a pressurized liquid loading line between check valves are exposed to the atmosphere. Pressurized natural gas liquids flash when loading lines are disconnected. The loading line volume and vapor recovery line volume should be estimated using the inner diameter of the line and the length of the line between the two shut off valves.

Section 05 – Stack Information

Provide this information for any combustion device used to control the loading emissions. If your equipment contains multiple stacks or emission release points, you must submit a separate sheet with relevant information.

Operator Stack ID No.: The in-house identification number for a stack, if any.

Base Elevation (feet): Elevation of the base of the stack or emission point.

Discharge Height Above Ground Level: Vertical distance in feet from ground level to emission outlet level.

Temperature: Exhaust stream exit temperatures under normal operating conditions, to nearest 1^{o}F.

Flow Rate: Actual cubic feet per minute (ACFM) at normal operating temperature and pressure, to nearest 1 ACFM.

Velocity: To the nearest 0.1 ft./sec., obtained by dividing Flow Rate by area of exit.

Moisture: Percent by weight of exhaust gases.

Section 06 – Stack (Source, if no combustion) Location

If no combustion device is used to control emissions, list location information for the loading rack(s).

Horizontal Datum (NAD27, NAD83, WGS84): The horizontal geodetic datum of the source location coordinates. One of the following datum must be referenced: NAD27, NAD83, WGS84.

Latitude/Longitude ***OR*** UTM description: *provide one or the other*. These are coordinate systems and a means for identifying a point on the earth on a planimetric map. These can be found using Internet tools such as Google Earth or obtained from a georeferenced plot plan of the facility. UTM descriptions will include a zone number.

Method of Collection for Location Data: Identify how the Latitude/Longitude or UTM coordinates were obtained. Methods include: map (identify map name or type), GPS, GoogleEarth, etc.

Section 07 – Control Device Information

Select the appropriate control device operated by the source, if applicable. Complete the additional information requested under the device selected for control. Provide supporting documentation for control device utilized in process.

VRU Size: Provide the vapor recovery unit's volumetric flow capacity and, if available, it's horsepower rating.

Combustor Type: Specify the type of combustor used to control emissions (e.g., enclosed flare or open-flame flare)

Combustor Minimum temp. to achieve requested control: Provide the minimum temperature that the combustor must maintain in order to meet the requested control efficiency. Enter "N/A" in this field if the combustor does not have a temperature setpoint and the requested control efficiency is assumed to be achieved as long as a pilot flame is present.

Other: If a control device other than a vapor recovery unit or combustor is used, provide a description of that control system.

Section 08 - Emissions Inventory Information & Emission Control Information

Data Year: Enter the calendar year that the "actual calendar year emissions" reported in this section were emitted in. Your actual emissions cannot be reported to APCD without this information.

Emission Factor: List each specific pollutant's emission factor and appropriate unit used to determine actual and requested emissions from the source. When reporting vapors displaced from cargo carriers, the emission factors should be reported in "lb/1000 gallons" units. The emissions factors for vapors displaced from a cargo carrier should be based on the loading loss equation found in EPA AP-42, Chapter 5.2. When reporting vapor losses from pressurized loading lines, the emission factors should be reported in "lb/load" units.

Actual Calendar Year Emissions: The actual amount of emissions emitted annually. Use the previous calendar year emissions if possible. Note the data year (in the box above) that was used to determine these actual emissions.

"Uncontrolled" = calculated emissions prior to taking any credit for reductions due to a control device.

"Controlled" = calculated emissions downstream from any control device.

Requested Permitted Emissions: This level will be your permit limit (maximum allowed). The emission level should relate to the annual operation, condensate throughput and control device efficiency listed in previous sections. If left blank the Division will calculate emission based on information supplied in previous sections.

Emission Method or Factor Source: Identify how your emissions were estimated. Example emission factor sources/methods include: AP-42 and engineering calculation. If emission estimations are based upon methods other than those supplied by the Division or EPA, sufficient supporting documentation for the method must be included.

Section 10 – Applicant Certification

Signature, date signed, printed name and title of person legally authorized to supply data must be provided.

Additional guidance can be obtained here:

The Air Pollution Control Division at (303) 692-3150, or online at:

http://www.cdphe.state.co.us/ap/stationary.html

The Small Business Assistance Program at (303) 692-3175, (303) 692-3148, or online at:

http://www.cdphe.state.co.us/ap/sbap/index.html